

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

# (12) UK Patent Application (19) GB (11) 2 258 424 (13) A

(43) Date of A publication 10.02.1993

(21) Application No 9116956.5

(22) Date of filing 06.08.1991

(71) Applicant  
Robert Clements  
118 Manor Road, Chigwell, Essex, IG7 5PW,  
United Kingdom

(72) Inventor  
Robert Clements

(74) Agent and/or Address for Service  
Marks & Clerk  
57-60 Lincoln's Inn Fields, London,  
WC2A 3LS, United Kingdom

(51) INT CL<sup>5</sup>  
B42D 15/00 1/00, B65D 5/42, G09F 27/00

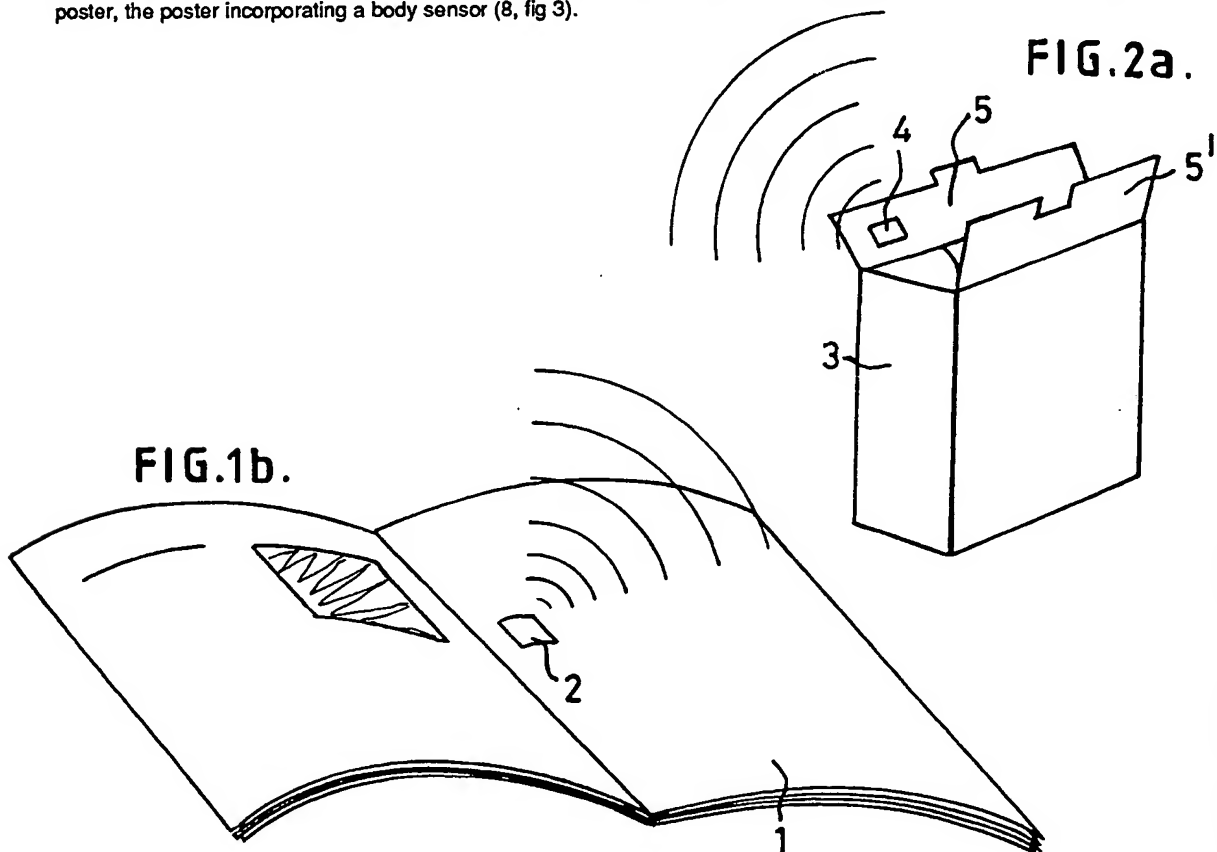
(52) UK CL (Edition L)  
B6A ADE A300  
B8P PAX  
G5C CAE  
U1S S1790 S2265 S2286

(56) Documents cited  
GB 1276724 A EP 0070653 A EP 0034024 A  
WO 88/10489 A WO 83/02029 A US 4102067 A  
US 3928928 A

(58) Field of search  
UK CL (Edition K) B6A ADE, B8P PAX, G5C CAE  
INT CL<sup>5</sup> B42D, B65D, G09F  
Online databases: WPI

(54) Printed matter, containers or posters with electronic sound production

(57) Printed visual medium (1) carrying information or advertising, or packaging (5) electronic sound producing means (2, 4) for producing a message in the form of music or a spoken message. The medium (1) may be for example a newspaper, magazine or brochure with the means (2, fig 1b) provided on a page thereof. The packaging may be a carton, container or wrapper with the means (4, fig 2a) on the flap (5) thereof. When the medium or packaging is opened, the sound producing means is activated by means such as contact means, light sensitive means or a tab to produce the sound. Alternatively, the sound producing means can be included in a poster (7, fig 3) to produce the required sound when a person approaches the poster, the poster incorporating a body sensor (8, fig 3).



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

GB 2 258 424 A

46 11 92

1/2

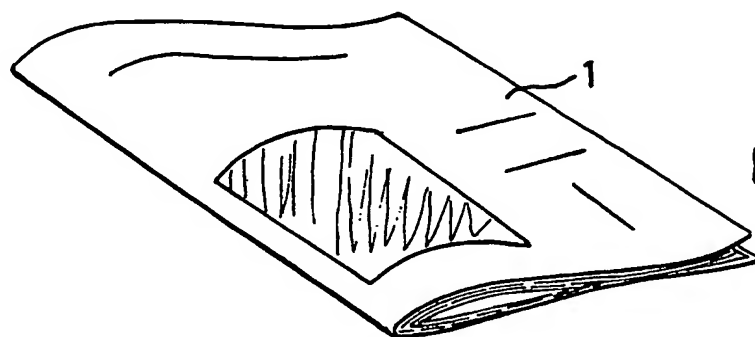


FIG. 1a.

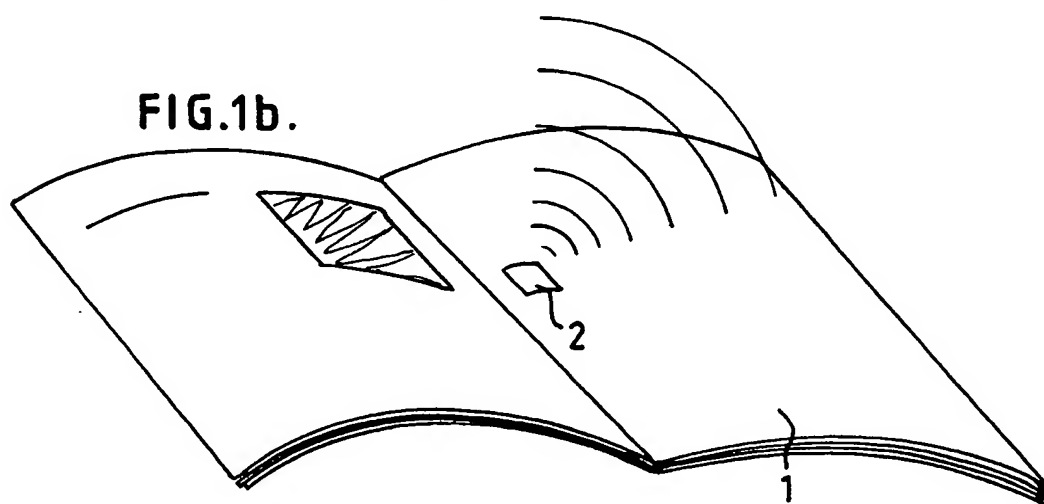


FIG. 1b.

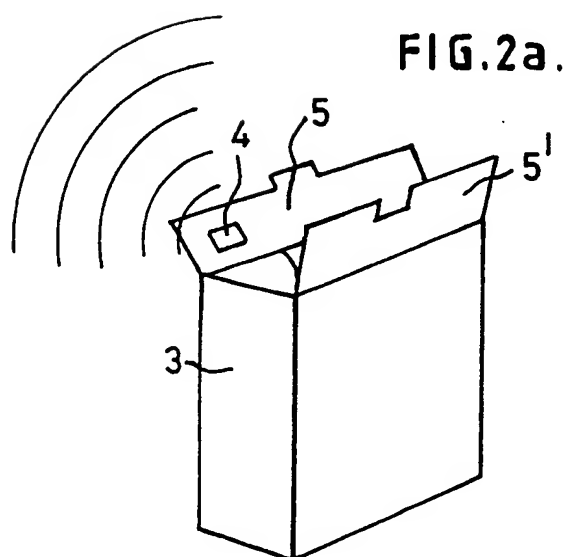


FIG. 2a.

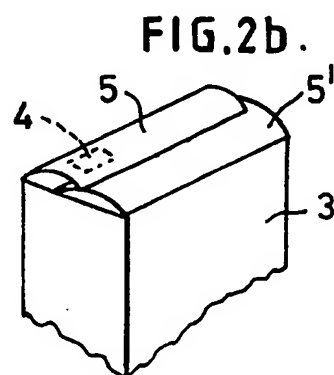


FIG. 2b.

4 6 11 ..

2/2

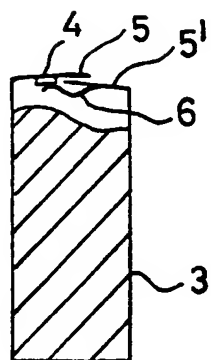


FIG. 2c.

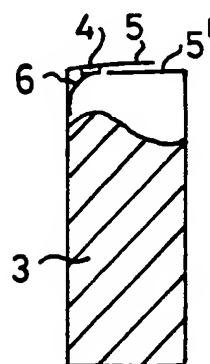


FIG. 2d.

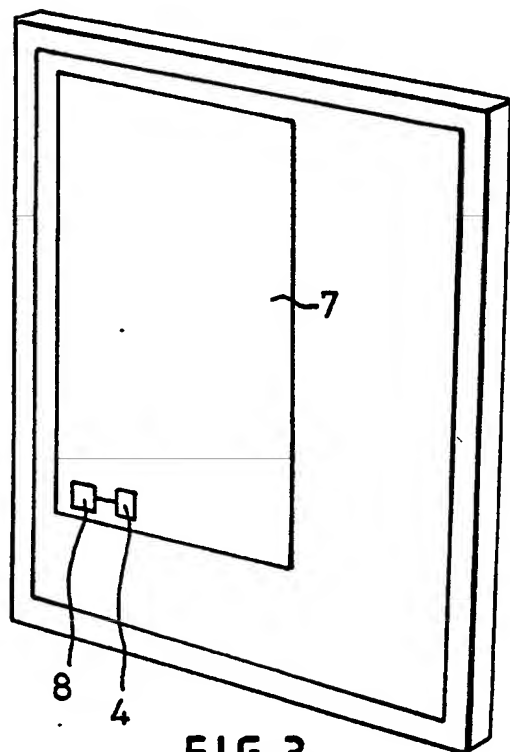


FIG. 3.

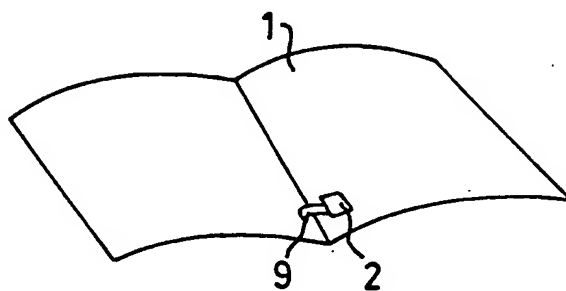


FIG. 4.

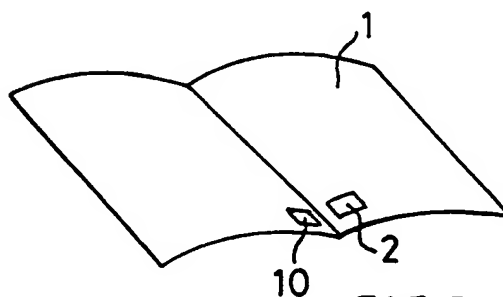


FIG. 5.

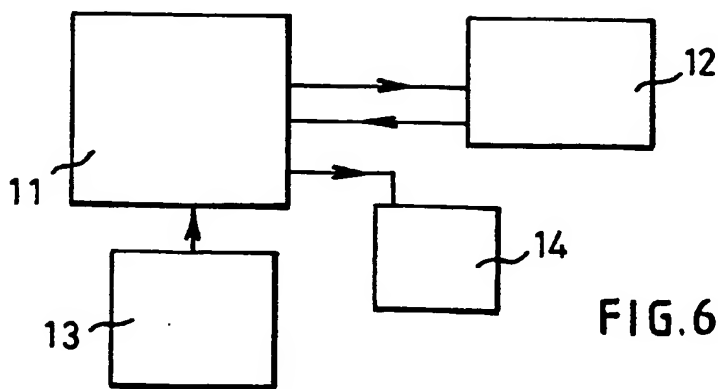


FIG. 6.

2253424

1

### INFORMATION PRESENTATION MEANS OR PACKAGING

This invention relates to a printed visual medium carrying information or advertising, such as a poster, newspaper, magazine, brochure, record sleeve etc or to packaging such as containers for milk, sugar, confectionery, drinks etc.

In the field of goods to which the present invention relates, great emphasis is placed on the ability of packaging or a visual medium to make an impact on the reader or user. This is generally achieved by carefully designed artwork and printing or packaging style.

#### The Invention

A first aspect of the invention provides a printed visual medium carrying information or advertising, wherein electronic sound producing means are provided for producing a sound when the medium is placed in a specific configuration.

The medium may advantageously comprise an unbound medium. In particular, it could be a publication such as a newspaper, brochure, handout, free sheet, comic,

## 2

calendar, advertising material or similar publication. The sound producing means may produce sound in the form of music or a message. Preferably, the medium, such as a newspaper, has a first closed configuration being the specific configuration. The medium may also comprise a bound medium, such as a magazine.

The specific configuration may correspond for instance to a newspaper being open at a specific page or pages, or to a pull tab or other device being pulled. Alternatively, pulling a record out of its sleeve, or a sheet out of an envelope could put the respective medium in the specific configuration.

The medium of the invention allows a greater impact to be attached to various articles, pages or titles in the medium. The sound producing means is advantageously a digital electronic device having storage means for storing data, sound synthesizing means for producing a sound in accordance with data stored in the storage means and signal giving means for giving a signal to the sound synthesizing means when the medium is placed in its specific configuration, so that the sound is produced. Digital and electronic devices allow the device to be sufficiently small due to micro miniaturisation technology to allow the device to be easily contained within the medium.

## 3

According to a second aspect of the invention, a container is provided which has sound producing means for producing a sound when the container is opened.

The container may be a record sleeve, cassette box, CD box, envelope, food container or packaging, cigar or cigarette box, match box, or similar container.

The sound may be produced when a part of the container is put into a specific configuration, as in the visual medium according to the invention.

The sound producing means may produce a sound in the form of music or a message.

The sound producing means of the container may be digital electronic means as in the visual medium of the invention.

A third aspect of the invention provides poster means comprising electronic sound producing means. The sound producing means comprises detector means for giving a signal to the sound producing means when a person approaches the poster means, whereby a sound is produced in the form of music or a message for example. This allows the poster means to draw the attention of a beholder or passer by much more effectively.

The third aspect of the invention may be applied to a standard printed poster, or to any means for displaying an announcement or advertisement or the like in a public place.

Preferably, the detecting means comprises an infra-red heat sensor for detecting the body heat of a person.

The invention will be further described by way of example only with reference to the accompanying drawings, in which:

#### Brief Description of the Drawings

Figures 1a and 1b show schematic illustrations of a newspaper, pamphlet, brochure, magazine or similar printed medium according to the invention;

Figures 2a to 2d show containers according to the invention;

Figure 3 shows a poster according to the invention;

Figures 4 and 5 show different types of signal giving means for the medium according to the invention;



5

Figure 6 is a schematic flow diagram for the operation of the sound producing means of the medium of the invention.

#### Detailed Description of the Drawings

Figure 1a shows a sketch of an unbound medium 1 such as a newspaper, pamphlet, brochure, handout, free sheet, comic, calendar, advertising copy or other similar printed material. According to the invention, electronic sound producing means 2 is provided on a specific page or pages of the article 1 which will emit a sound when the article is opened at the relevant page or pages. This helps to draw attention to the page in question. In addition, the sound emitted by the sound producing means 2 may be musical or may comprise a spoken message such as a single word, phrase, verse or statement. Accordingly, the sound producing means 2 can emphasize a particular feature on the page.

For example if the newspaper is running a competition, the page with the competition on it could announce the fact when the reader turns to the page, repeating the statement a number of times and stopping automatically.

The medium may also comprise a bound medium, such as a magazine.

6

Figure 2 shows a container such as a carton according to the invention. The carton may contain goods such as cereal, sugar, milk, biscuits, confectionary, cigarettes or cigars, a record, cassette or CD, matches, stationery or any of a large variety of products. Sound producing means 4 is shown positioned on a flap 5 of the carton so that it is activated when the carton is opened or if the carton is put into a specific configuration. Suitable specific configurations include pulling a liner out of a box, pulling a tab, flap etc or even pulling a string. The sound emitting means may again produce a musical response or a word, verse, statement or phrase.

Figure 2b shows the carton of Figure 2a in a closed position with the flap 5 overlying the flap 5' so that the sound producing means is brought into contact with the flap 5'. The sound producing means 4 can be activated by breaking contact with the flap 5'. Other actuating means for the sound producing means 4 may be provided, for example in the form of a pull tab attached to flap 5' as shown in Figure 2c. When the top flap 5 is lifted away from flap 5', the tab 6 will activate the sound producing means 4 to produce the sound. With the apparatus shown in Figure 2c, the sound can only be produced once, as the tab 6 will be disconnected after the carton is opened the first time. As shown in Figure 2d, a tab 6' may be provided attached to a wall of the

7

carton 3 so that relative motion of the flap with respect to the wall activates the sound producing means 4. This arrangement will allow the sound to be reproduced every time the carton is opened.

The sound producing means 4 may alternatively comprise a light sensor, so that when the carton is opened and the sound producing means 4 is exposed to light, the sound is produced.

Figure 3 shows a poster 7 according to the invention mounted on a board. Poster 7 comprises a remote sensor 8 which can sense the presence of a person looking at (or passing) the poster to trigger electronic sound producing means 4 to give an audible message to the person. The sensor 8 may be in the form of a proximity sensor or an infra-red heat sensor for sensing the body heat of a person close enough to the poster. The range at which the sensor 8 will be effective is clearly limited, but it can be matched to the range at which the sound produced by the sound producing means 4 will be audible.

Figures 4 and 5 shown means whereby the sound producing means of a visual medium according to the invention such as a newspaper or magazine can be activated when the visual medium is turned to the appropriate page.

## 8

In Figure 4, a tab 9 on the adjacent page is shown which will move with respect to the sound producing means 2 when the page is opened.

Figure 5 shows an arrangement in which a contact 10 is provided which will normally be in contact with the sound producing means 2. When the page is opened, the contact will be broken and the sound producing means 2 can produce the sound.

Figure 6 shows a schematic drawing of the operation of the sound producing means used in the visual medium or container or similar article of the invention. 11 is a micro electronic control device for controlling the operation of the sound producing means. Preferably, the sound producing means will be a digital electronic device of very small size, in particular, of very great thinness. This will allow it to be interleaved between the pages of a visual medium, for example a newspaper or magazine, without increasing the bulk or weight of the visual medium. Digital data for the synthesis of the correct sound can be stored in memory means 12. Signal giving means as described in relation to Figures 2b, 2c, 2d, 4 or 5 is shown schematically at 13. When the visual medium or container or similar article is opened at the appropriate page or put in a specific configuration, the sensor 13 gives a signal to the

control means 11 which can read the sound synthesizing data from the memory 12. This sound synthesizing data is passed to sound producing means 14 which may be a very thin sound producing device such as an acoustic transducer, for example a ceramic acoustic transducer.

The invention has been described above with particular reference to a newspaper and a packaging container. The invention has application in a large variety of forms of packaging and related products. For instance, non-rigid packaging or wrapping for confectionary could enclose sound producing means operating substantially according to the invention. The sound producing means could be activated particularly by exposure to light. Bottles or cans could comprise tops having a space to house sound producing means according to the invention, the sound producing means being operated by breakage of the seal or exposure to light.

The invention can also be used for instance for a record sleeve, compact disc container, cassette box or the like. In particular, the sound producing device could be used to identify the contents of the box or to reproduce some of the matter on the recording.

The present invention has been described above purely by way of example, and modifications can be made within the

10

spirit of the invention. The invention also consists in any individual features described or implicit herein or shown or implicit in the drawings or any combination of such features or any generalization of any such features or combination.

Claims

1. A printed visual medium carrying information or advertising material, having electronic sound producing means for producing a sound when the medium is placed in a specific configuration.
2. The medium of Claim 1, comprising an unbound medium.
3. The medium of Claim 2, comprising a newspaper, brochure, pamphlet, hand-out, free sheet, comic, calendar, or advertising material.
4. The medium of Claim 1, 2 or 3, wherein the sound is in the form of music or a message.
5. The medium of any of the preceding Claims, having a first closed configuration and a second open configuration being said specific configuration.
6. The medium of any of the preceding Claims, wherein the sound producing means comprises electronic digital data storage means, signal giving means for giving a signal when the medium is placed in said specific configuration and sound synthesizing means responsive to the signal giving means for producing sound in accordance with data stored in the storage means.

12

7. A container, wherein electronic sound producing means are provided for producing sound when the container is opened or put in a specific configuration.

8. The container of Claim 7, wherein the sound producing means comprises electronic digital data storage means, signal giving means for giving a signal when the container is opened and sound synthesizing means responsive to the signal giving means for producing sound in accordance with data stored in the storage means.

9. The container of Claim 7 or 8, wherein the sound producing means produces a musical sound or a message.

10. The container of Claim 7, 8 or 9, being a record sleeve, cassette box, compact disc box, food container or wrapper, envelope, cigar or cigarette box or match box.

11. Poster means, comprising electronic sound producing means, the sound producing means comprising detector means for giving a signal to the sound producing means when a person approaches the poster means.

12. The poster means of Claim 11, wherein the detector means comprises a heat sensor.



13

13. Printed visual medium carrying advertising material or information substantially as herein described with reference to Figures 1a, 1b, 4, 5 and 6 of the accompanying drawings.

14. A container substantially as herein described with reference to Figures 2a, 2b, 2c, 2d and 6 of the accompanying drawings.

15. Poster means substantially as herein described with reference to Figures 3 and 6 of the accompanying drawings.

-14-

**Patents Act 1977**  
**Examiner's report to the Comptroller under**  
**Section 17 (The Search Report)**

Application number

9116956.5

**Relevant Technical fields**

(i) UK CI (Edition K ) B6A(ADE) , B8P(PAX) , G5C(CAE)

(ii) Int CI (Edition 5 ) B42D, B65D, G09F

Search Examiner

.S WALLER

**Databases (see over)**

(i) UK Patent Office

(ii) ONLINE DATABASES: WPI

Date of Search

27 SEPTEMBER 1991

Documents considered relevant following a search in respect of claims

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB 1276724 (REKLAM)	11
X	EP 0070653 (MARUTANI) see page 2 line 23	1, 2, 4, 6
X	EP 0034024 (SWARZTRAUBER)	1, 2, 4, 6
X	WO 88/10489 (TARLOW) see page 5, lines 5 to 9	1, 4, 6
X	WO 83/02029 (THOMPSON)	11
X	US 4102067 (TARRANT)	1, 4, 6, 7, 8, 9
X	US 3928928 (KALUST)	7, 8, 9

SF2(p)

sj1 - c:\wp51\doc99\fil000030

15

Category	Identity of document and relevant passages	Relevance to claim(s)

### Categories of documents

**X:** Document indicating lack of novelty or of inventive step.

**Y:** Document indicating lack of inventive step if combined with one or more other documents of the same category.

**A:** Document indicating technological background and/or state of the art.

**P:** Document published on or after the declared priority date but before the filing date of the present application.

**E:** Patent document published on or after, but with priority date earlier than, the filing date of the present application.

**&:** Member of the same patent family, corresponding document.

**Databases:** The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).